

1. A laminate, comprising:
  - a tough extruded core of thermoplastic resin such as ionomer, EVA or styrene stiffened ionomer; and
  - at least one impact resistant strength layer of nonwoven material being made from a bi-component staple fiber or blend of PET staple fiber and binder staple fiber or blend of PET staple fiber and bi-component staple fiber, and having a combination of PET fibers and PETG or other copolymer or homopolymer fibers as binding agent for PET.
2. The laminate of claim 1, wherein the thermoplastic components being miscible or mechanically compatible to allow for homogenization and incorporation into the extruded thermoplastic core thereby providing for complete recyclability of scrap material.
3. A stiff, moldable laminate, comprising:
  - a layer of tough thermoplastic resin;
  - a nonwoven fabric layer;
  - a tough extruded core of thermoplastic resin;
  - at least one impact resistant strength layer of nonwoven material constructed from a bicomponent staple fiber or blend of PET staple fiber and binder staple fiber or blend of PET staple fiber and bicomponent staple fiber, the nonwoven layer using a combination of PET fibers and PETG or other copolymer or monopolymers fibers which act as a binding agent for PET.
4. The laminate of claim 3, wherein the staple fiber is 4-15 denier and 38 to 76mm in length.
5. The laminate of claim 4, wherein the thermoplastic components are miscible or mechanically compatible to permit homogenization and incorporation into the extruded thermoplastic core.

6. A laminate of a binding agent which is a thermoplastic binder fiber or a bi-component binder fiber which is thermally activated to bind and stiffen a nonwoven fabric into which it is incorporated.